AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. - 4.(Canceled)

5.(Currently Amended) The vane rotary expander according to any one of claims [[1]] 7 to [[4]] 10, wherein the expander is operated by means of an operating fluid expanding into a gas-liquid two phase from a liquid phase or a supercritical phase.

6.(Currently Amended) The vane rotary expander according to any one of claims [[1]] 7 to [[4]] 10, wherein the expander is operated by means of an operating fluid containing carbon dioxide as a main component.

7.(New) An expander having a plurality of operating chambers for expanding a high-pressure operating fluid and a shaft for obtaining a rotating power by means of expansion of the operating fluid in the operating chambers comprising:

a first discharge port which firstly communicates to the operating chamber involving in a discharging process and a second discharge port which secondly

communicates to the same operating chamber;

a valve mechanism preventing the operating fluid from flowing back being provided to the first discharge port; and

a discharge chamber temporarily storing the operating fluid flowing out from the first and second discharge ports, wherein

a pressure (Pc) applied to the operating chamber which has a maximum volume immediately before it reaches the first discharge port is set lower than a pressure (Pd) applied to the discharge chamber, and the expander is set so that the volume of the operating chamber is compressed again immediately after it reaches the first discharge port to release the valve mechanism when the recompressed pressure exceeds the pressure applied to the discharge chamber.

8.(New) A vane rotary expander including: a cylinder having a cylindrical inner wall; side plates closing its both ends; a rotor disposed in the cylinder, an outer circumferential segment of the rotor defining a small clearance together with the inner wall of the cylinder; vanes inserted into vane grooves formed in the rotor at respective ends thereof so as to be freely slidable, the other ends of the vanes being in contact with the inner wall of the cylinder to form a plurality of operating chambers between the cylinder and the rotor; and a shaft integrally formed with the rotor, the shaft being rotatably supported by means of an axis, wherein a power for

rotating the shaft is obtained by expanding a high-pressure operating fluid in the operating chamber, comprising:

a first discharge port firstly communicating to the operating chamber involving in a discharging process and a second discharge port secondly communicating to the same operating chamber, both discharging ports being provided in the cylinder in a circumferential direction;

a valve mechanism preventing the operating fluid from flowing back being provided to the first discharge port; and

a discharge chamber temporarily storing the operating fluid flowing out from the first and second discharge ports, wherein

a pressure (Pc) applied to the operating chamber which has a maximum volume immediately before it reaches the first discharge port is set lower than a pressure (Pd) applied to the discharge chamber, and the expander is set so that the volume of the operating chamber is compressed again immediately after it reaches the first discharge port to release the valve mechanism when the recompressed pressure exceeds the pressure applied to the discharge chamber.

9.(New) The vane rotary expander according to claim 8, wherein when the number of the vanes is n, the first discharge port is formed in the cylinder at a position of approximate $\{180 \times (1 + 1/n)\}$ degrees from the small clearance in a

direction where the shaft rotates, and the second discharge port is formed in the cylinder at any position in an area from an angle of approximate {180 x (1 + 1/n)} degrees to an angle of 360 degrees from the small clearance in the direction where the shaft rotates.

10.(New) The vane rotary expander according to claim 9, wherein a central angle around the shaft on the cylinder between the first discharge port and the second discharge port and/or between the second discharge ports is smaller than or equal to (360/n) degrees.